



USTDA

U.S. TRADE AND DEVELOPMENT AGENCY

Sub-Saharan Africa

Emerging Energy Investment Opportunities

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USTDA supports **project planning activities, pilot projects and reverse trade missions** to help project developers obtain financing and achieve implementation, while building partnerships between **U.S. companies** and **African project sponsors** and helping to meet the goals of Power Africa. The following list highlights select USTDA-supported feasibility studies that present compelling opportunities for follow-on partnerships between U.S. and African stakeholders.

Ghana

Eastern Transmission Line

Ghana Grid Company Limited / Delphos International, Ltd.

USTDA Intervention

USTDA's assistance provided analysis and initial design of a new 62 mile power transmission line between Asiekpe and Kpandu, and a new 143 mile line between Kadjebi and Yendi. These provide alternate transmission routes, making the electrification of unserved rural communities more affordable and accessible in the northern and eastern regions.

Outcome

Project implementation has not yet begun, but it remains a priority for the Ghana Grid Company

Next Steps

Development of the Kadjebi-Yendi and the Asiekpe-Kpandu lines are scheduled to commence upon completion of the Kpandu-Kadjebi line. These projects present strong opportunities for U.S. investors, suppliers and developers.

Kenya

Tea Development Authority Energy Management

Kenya Tea Development Agency Limited / Paul C. Rizzo Associates, Inc.

USTDA Intervention

USTDA's assistance examined an integrated energy management project for the Kenya Tea Development Agency (KTDA). KTDA is the largest smallholder tea organization in the world. KTDA contributes 62% of the total tea produced in Kenya, manages 65 separate tea processing facilities, and takes leadership roles on behalf of its member companies in an industry that accounts for about 28% of the country's total export earnings. Despite its importance, the Kenyan tea industry is plagued by limited, unreliable and expensive access to energy in tea factories.

Outcome

This study sought to address KTDA's power needs by examining three aspects of KTDA's energy requirements: the development of mini-hydroelectric power stations at various factories, increasing their energy efficiency, and securing the supply of biomass fuel for boilers. One mini-hydro power plant has been completed at the Imenti Tea Factory in Meru, and six others are in different phases of construction.

Next Steps

There are 6 projects under construction and 3 possible sites remaining for mini-hydro power station projects to be developed, presenting strong opportunities for U.S. technology providers and investment partners. KTDA is also considering solar power for some remote locations, as Kenya is heavily reliant on rainfall to produce energy and a drought requires compensatory power generation through fossil fuel combustion.

For more information on these or other USTDA activities, please email: Africa@ustda.gov.



Liberia

Mt. Coffee Hydropower Plant

Ministry of Lands, Mines & Energy/Liberia Electricity Corporation / Stanley Consultants, Inc.

USTDA Intervention	Outcome	Next Steps
USTDA's assistance provided analysis and initial design for the reconstruction and expansion of the Mount Coffee hydropower station in Liberia. Built in the 1960s, the facility served as the backbone of the Liberian electrical grid until it was destroyed during a period of civil war. Reconstruction and expansion of this facility would greatly improve electricity capacity and stability in the greater Monrovia region. Stanley Consultants completed the study in 2008 for the Liberia Electricity Corporation.	In 2013, the project was fully financed by the Government of Norway, the European Investment Bank, the German Development Bank KfW, and the Government of Liberia. The bidding and awarding of contracts is almost complete, and construction began in early 2014. The target date to achieve first power to Monrovia is December 15, 2015, but the Ebola outbreak has had an impact on the project and may cause delays.	The target date to achieve first power to Monrovia is December 15, 2015. The first turbine would provide power by this date, and the remaining turbines would come online at two-month intervals during 2016. Contract awards continue to be made, presenting opportunities for U.S. suppliers.

Nigeria

LiLE Hybrid Renewable Power Plant

LADOL Integrated Logistics Free Zone Enterprise / Concurrent Technologies Corporation

USTDA Intervention	Outcome	Next Steps
USTDA's assistance provided analysis and design of an 18 MW Hybrid renewable power plant that would incorporate solar photovoltaic power, solar thermal energy recovery, and waste-to-energy applications. The power plant will include conservation components and use dual fuel, medium speed, compression ignition reciprocating internal combustion engine generators.	LADOL is rapidly moving forward with project implementation and is looking to procure from major international firms.	Significant opportunities exist for U.S. investors, developers and technology providers.

Kiri Dam Hydroelectric Power Plant

Office of the Governor of Adamawa State / Princeton Energy Resources International, LLC (PERI)

USTDA Intervention	Outcome	Next Steps
USTDA's assistance analyzed several options for a 35 MW hydroelectric power plant to be constructed at the Kiri Dam site on the Gongola River in northeastern Nigeria. Construction would require embankment intake, resulting in 142 GWh per year power generation with a nominal 20 MW capacity. The estimated cost of construction and development for this project is roughly \$60 million, as well as an additional \$18.6 million for a transmission line connection to a substation. .	The State of Adamawa selected Galileo Scientific, a US company, as project developer. The Kiri Dam Development Corporation (KDDC) was subsequently created as a special purpose vehicle, responsible for securing financing and procuring the goods, services and technologies under a Build-Operate-Transfer agreement with the State. KDDC is completing additional design work and an environmental impact assessment while working to secure project financing. Megatron (South Africa) is serving as EPC contractor and additional design and consulting work are being provided by AECOM.	With design and development well underway, strong opportunities exist for investors and financing partners.